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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/858,989	05/15/2001	Donald C. D. Chang	PD-201015A	3124

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Hughes Electronics Corporation
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EXAMINER	
TORRES, MARCOS L	

ART UNIT	PAPER NUMBER
261	

MAIL DATE	DELIVERY MODE
01/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

JAN 22 2008

Office Action Summary

Application No.

09/858,989

Applicant(s)

CHANG ET AL.

Examiner

Marcos L. Torres

Art Unit

2E17

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1936 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 13007, 43007, 111607.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 4-30-07 has been entered.

Response to Arguments

2. There are no new arguments in record.

Information Disclosure Statement

3. The information disclosure statement (IDS) filed on 1-30-07, 4-30-07 and 11-16-07 were considered by the examiner.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-4 and 9-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Gross US 6507739B1 in view Stangel 5,021,793 and further in view of Turcotte US 5856804.

As to claims 1-2, Gross discloses a communications system for communicating with a plurality of users (see col. 1, lines 8-9; col. 2, line 66 – col. 3, line 6) comprising: stratospheric platform (see fig. 2, item 210; col. 1, lines 9-11; col. 4, lines 52-54) and a adaptive antenna having a plurality of array antenna elements for simultaneously generating a plurality of communication beams (see fig. 2, items 211, 222, 218; fig. 4, item 412, 422, 426; col. 4, lines 49-52); a gateway station in communication with said stratospheric platform (see fig. 2, item 214, 204; col. 5, lines 10-12), said gateway station forming a plurality of beam commands for each of the plurality of antennas by

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communicating a plurality of control signal to the stratospheric platform to form the plurality of communication beams (see fig. 2, items 214, 216; col. 4, lines 47-54; col. 5, lines 10-22; col. 8, lines 37-42). Gross does not specifically disclose a main array antenna element. In an analogous art, Stangel discloses using a main array antenna element (see col. 3, lines 7-13). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings for permitting to steer the communication beam to desired location.

Gross and Stangel do not specifically disclose a unique beam assigned and moves with each user. In another analogous art, Turcotte discloses a unique beam assigned and moves with each user (see col. 10, lines 6-26), thereby reducing interference and improving efficiency. Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine this teaching for the simple purpose of covering the desired area.

As to claims 3 and 4, Gross discloses a communication system further comprising a plurality of base station communicating with a fixed or mobile user (see col. 4, lines 3-11). Gross do not specifically disclose main array antenna elements for generating a plurality of communication beams. In an analogous art, Stangel discloses using a main array antenna element (see col. 3, lines 7-13), thereby permitting to steer the communication beam to desired location.

As to claim 9, Gross discloses a system wherein said ground station is coupled to a terrestrial network (see col. 5, lines 16-22).

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As to claim 10, Gross discloses a system wherein said terrestrial network comprises the Internet (see col. 10, lines 13-22).

As to claim 11, Gross discloses a system wherein the terrestrial network comprises the public service telephone network (see col. 5, lines 39-44).

8. Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross in view of Stangel and Turcotte as applied to claims 1-2 and 9-11 above, and further in view of Yeh US 4,085,368.

As to claims 8, Gross disclose a high altitude device with a plurality of elements (see col. 4, lines 47-54). In an analogous art, Yeh discloses a plurality of auxiliary elements for canceling interference between the beams (see col. 2, lines 43-55), thereby canceling interference. Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings in order to have a better communication avoiding interference.

As to claim 5, Yeh discloses a system wherein said auxiliary element output is a function of a direction of the plurality of the communication beams (see col. 2, lines 47-55). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings in order to have a better communication avoiding interference.

9. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross in view of Campanella US 6,249,514B1 and further in view of Turcotte.

As to claims 12 and 13, Gross discloses a communications system for communicating with a plurality of user (see col. 1, lines 8-9; col. 2, line 56 – col. 3, line

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6), comprising: a ground station (see col. 5, lines 10-12) a beam generator for generating a plurality of control signals; a digital beam former circuit receiving the beam control signals and generating a plurality of first element control signals for multiple dynamic communication beams for the plurality of user (see col. 7, lines 28-30, 61-63; col. 8, lines 37-43) an RF subsystem for communicating an RF signal corresponding to the control signal (see fig. 2, item 216), an adaptive antenna having a plurality of panels, a stratospheric platform having; a payload receiver for receiving the RF signals and simultaneously generating a plurality of communication beams in response to the second plurality of element control signals user (see col. 7, lines 28-30 61-63; col. 8, lines 37-43). Gross do not specifically discloses having a demultiplexer demultiplexing the RF signals or a unique beam assigned and moves with each user. In an analogous art, Campanella discloses a demultiplexer demultiplexing the RF signals (see fig. 3, items 42, 43). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings for permitting to separate the multiplexed or combined signals and saving bandwidth by the use of the common and well-known technique of multiplexing

Gross and Campanella do not specifically disclose a unique beam assigned and moves with each user. In another analogous art, Turcotte discloses a unique beam assigned and moves with each user (see col. 10, lines 6-26). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings for reducing interference and improving efficiency.

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As to claim 14, Gross discloses a system wherein said ground station is coupled to a terrestrial network (see col. 5, lines 16-22).

As to claim 15, Gross discloses a system wherein said terrestrial network comprises the Internet (see col. 10, lines 13-22).

As to claim 16, Gross discloses a system wherein the terrestrial network comprises the public service telephone network (see col. 5, lines 39-44).

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gross in view of Stangel and Turcotte as applied to claims 1 above, and further in view of Ide US 6,556,845.

As to claim 6, Gross discloses a system wherein the gateway station comprises a plurality of gates (see col. 5, lines 10-22). Gross do not specifically disclose each having a respective weight, said auxiliary element output being a function of said weight. In an analogous art, Ide discloses wherein the gateway station comprises a plurality of multiplication gates each having a respective weight, said auxiliary element output being a function of said weight (see col. 3, line 12 – col. 4, line 59), thereby permitting to make a decision based on the result. Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to add these teachings to the modified Gross system for a better signal transmission and reception.

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gross in view of Araki US 5,548,801 and further in view of Turcotte.

As to claim 17, Gross discloses a method for controlling a communication system having a stratospheric platform with a plurality of phase array reconfigurable antenna

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(see col. 4, lines 49-50) comprising the step of: in a gateway forming a plurality of control signals for generating multiple dynamic communication beams at each of the plurality of antennas; coupling the control signals for multiple dynamic communication beams to a plurality of stratospheric platform; and simultaneously generating a the multiple communication beams at each of the plurality of antenna for a plurality of users in response of the control signals user (see col. 7, lines 28-30, 61-63; col. 8, lines 37-43). Gross does not specifically disclose using track files on the gateway station. In an analogous art Araki discloses using track files on the gateway station (see col. 6, lines 50-59). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of invention combine these references for permitting to select only the necessary communication resources in the desired location.

Gross and Araki do not specifically disclose a unique beam assigned and moves with each user. In another analogous art, Turcotte discloses a unique beam assigned and moves with each user (see col. 10, lines 6-26). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of invention combine these references for managing the communication resources by beaming to desired track location and saving the wireless communication resources.

12. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gross in view of Araki and Turcotte as applied to claims 17 above, and further in view of Ide.

As to claim 18, Gross discloses a system wherein the gateway station comprises a plurality of gates (see col. 5, lines 10-22). Gross do not specifically disclose each having a respective weight, said auxiliary element output being a function of said

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weight. In an analogous art, Ide discloses wherein the gateway station comprises a plurality of multiplication gates each having a respective weight, said auxiliary element output being a function of said weight (see col. 3, line 12 – col. 4, line 59), thereby permitting to make a decision based on the result. Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to add these teachings to the modified Gross system for a better signal transmission and reception.

Conclusion

13. This is a continuation of applicant's earlier Application No. 09/853,989. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Or faxed to:

571-273-8300

for formal communication intended for entry, informal communication or draft communication; in the case of informal or draft communication, please label "PROPOSED" or "DRAFT"

Hand delivered responses should be brought to:

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcos L. Torres whose telephone number is 571-272-7926. The examiner can normally be reached on 8:00am-6:00 PM alt. Wednesday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-252-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

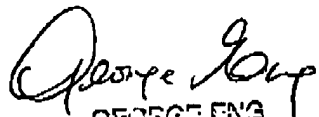
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marcos L Torres
Examiner
Art Unit 2617

/mt/


GEORGE FING
SUPERVISORY PATENT EXAMINER

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Substitute for form PTO/SB/08A INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Complete if Known		
	Application Number	09/858,939	
	Filing Date	05/15/2011	
	First Named Inventor	Donald Chang	
	Art Unit	2617	
Date:	November 16, 2007	Examiner Name	TORRES, Marcos L.
Sheet 1 of 1	Attorney Docket Number	PD-201015A	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Foreign Patent Document Country Code-Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

OFFICIAL COMMUNICATIONS FROM FOREIGN PATENT OFFICE IN COUNTERPART FOREIGN APPLICATIONS			
Examiner Initials*	Cite No.	Country	Description
/M.T./		CA	Canadian Office Communication dated December 12, 2005 in counterpart Canadian patent application no. 2434221
/M.T./		CA	Canadian Office Communication dated November 30, 2006 in counterpart Canadian patent application no. 2434221
/M.T./		EP	EPO Communication dated November 25, 2003 in counterpart European patent application no. 02707428.6
/M.T./		EP	EPO Communication dated June 2, 2005 in counterpart European patent application no. 02707428.6
/M.T./		MX	Mexican Office Communication dated March 31, 2006 in counterpart Mexican patent application no. 3006453

Examiner Signature	/Marcos Torres/	Date Considered	01/07/2008
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PAGE 4/27 * RCVD AT 11/16/2007 6:11:41 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-2/14 * DNIS:2738300 * CSID:3109640941 * DURATION (mm:ss):05:58

PAGE 17/19 * RCVD AT 1/22/2008 6:48:47 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-4/12 * DNIS:2738300 * CSID:3109640941 * DURATION (mm:ss):05:14

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Substitute for form PTO/SB/08A INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Complete If Known		RECEIVED
	Application Number	09/858,989	CENTRAL FAX CENTER
	Filing Date	05-15-2001	APR 30 2007
	First Named Inventor	Donald C.D. Chang	
	Art Unit	2617	
	Examiner Name	TORRES, Marcos L.	
Date:	April 30, 2007		
Sheet 1 of 1	Attorney Docket Number	PD-201015A	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/M.T./		US-6,819,943	11-2004	Dalal, Yehaskal	
/M.T./		US-6,519,477	02-2003	Baler et al.	
/M.T./		US-6,410,731	04-1995	Rouffet et al.	
/M.T./		US-6,639,551	10-2003	Li et al.	
/M.T./		US-6,336,256	04-2002	Ramanujam et al.	
/M.T./		US-6,941,138	09-2005	Chang et al.	
/M.T./		US-6,556,809	04-2003	Gross et al.	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Foreign Patent Document Country Code-Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

Examiner Signature	/Marcos Torres/	Date Considered	01/07/2008
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PAGE 6/6 * RCVD AT 4/30/2007 7:49:00 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-3/11 * DNIS:2738300 * CSID:3109640941 * DURATION (mm:ss):02:00

PAGE 18/19 * RCVD AT 1/22/2008 6:48:47 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-4/12 * DNIS:2738300 * CSID:3109640941 * DURATION (mm:ss):05:14

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Substitute for form PTO/SB/08A INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Complete If Known	
	Application Number	09/858,989
	Filing Date	May 15, 2001
	First Named Inventor	Donald Chang
	Art Unit	2617
Date: January 30, 2007	Examiner Name	TORRES, Marcos L.
Sheet 1 of 1	Attorney Docket Number	PD-201015A

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/M.T./	1	US-5,361,074	11-1994	Hansen, James P.	
/M.T./	2	US-5,339,330	08-1994	Mallinckrodt, Albert J.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.	Foreign Patent Document Country Code-Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T

Examiner Signature	/Marcos Torres/	Date Considered	01/07/2008
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PAGE 6/6 * RCVD AT 1/30/2007 6:27:08 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/22 * DNIS:2738300 * CSID:3109640941 * DURATION (mm-ss):02-10

PAGE 19/19 * RCVD AT 1/22/2008 6:48:47 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-4/12 * DNIS:2738300 * CSID:3109640941 * DURATION (mm-ss):05-14